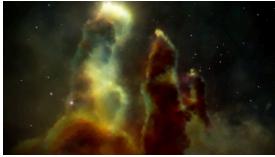


Hubblecast Episode 65: A whole new view of the Horsehead — celebrating Hubble's 23rd Birthday			
00:00 [Narrator] A new image released to celebrate the 23 rd anniversary of Hubble has captured a stunning infrared view of the Horsehead Nebula, one of the most distinctive objects in our skies. These infrared observations pierce through parts of the thick, obscuring dust, revealing the delicate wisps of gas that make up the Horsehead's famous and familiar shape.			
00:30 Intro			
00:58 [Dr J] Hello, and welcome to another episode of the Hubblecast! It's that time of the year again — Hubble's birthday! Some of us have followed Hubble from its conception and birth, through its childhood and teenage years, to see it emerge as a fully-fledged adult. Now, at the age of 23, Hubble is ageing — but more capable than ever. And every year of observing continues to bring us cutting-edge science, and stunning astronomical images.		 	
01:28 [Narrator] Some of the most striking and beautiful subjects of these images have been nebulae. These come in all shapes and sizes, and often seem to take on familiar or recognisable forms.			
01:47 [Dr J] Nebulae are vast interstellar clouds of gas and dust. There are several different types of nebulae, and they can take on a wide range of shapes and appearances. For example, the Eagle Nebula was formed by a collapsing interstellar cloud, and it glows due to the hot new stars forming within and around it. Some nebulae form in much more dramatic ways — like the Helix Nebula, for example. It is the result of a once Sun-like star blowing off its outer layers. Or the Crab Nebula, which is what remains of a massive star that exploded as a			

<p>supernova back in 1054.</p>		
<p>02:39 [Narrator] One of the most striking and distinctive nebulae in our skies is the Horsehead Nebula, due to its clear and curiously familiar shape. Hubble imaged this nebula back in 2001 to celebrate its 11th year of observing — and now, over a decade later, it is again involved in the telescope's birthday celebrations.</p> <p>Rising from a sea of gas and dust like a giant sea horse, this dusty region is a great example of a dark nebula — a cold, dark, cloud silhouetted against a background of glowing gas.</p> <p>But despite this nebula's fame and popularity, this new image from Hubble now shows it in a whole new light — quite literally!</p>		 
<p>03:37 [Dr J] This image was taken in the infrared. In infrared light, we can pierce right through some of the bulky plumes of dusty material which usually mask and obscure the inner regions of the Horsehead.</p> <p>The result is this rather fragile-looking structure, made of delicate, wispy folds of gas — very different to the nebula's appearance in the visible.</p>		
<p>04:05 [Narrator] Infrared light has longer wavelengths than visible light. We cannot see this radiation with our eyes alone, and so have capable infrared telescopes or instruments — for example, Hubble's Wide Field Camera 3. Seemingly normal-looking areas of sky can suddenly appear to be dramatically different in this part of the spectrum.</p>		
<p>04:37 [Dr J] This striking new view of the Horsehead Nebula is a fitting celebration of an incredible 23 years of the NASA/ESA Hubble Space Telescope.</p> <p>This is Dr J, signing off for the Hubblecast. Once again, nature has surprised us beyond our wildest imagination.</p>		 

[05:08]

Ends